

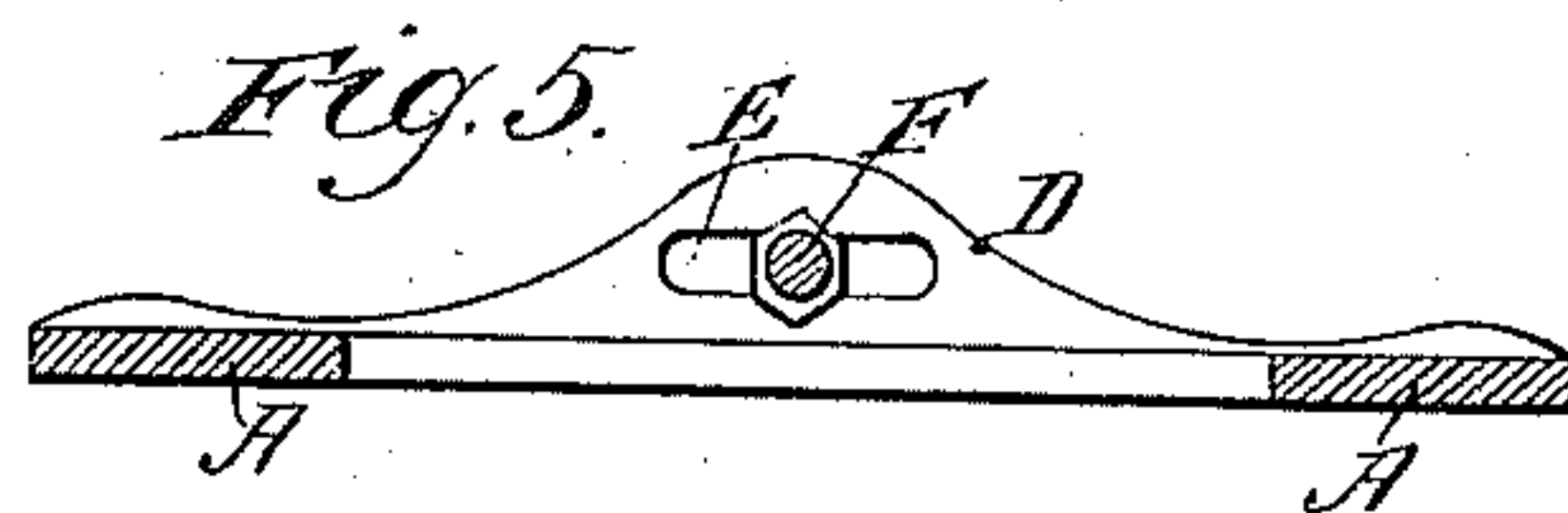
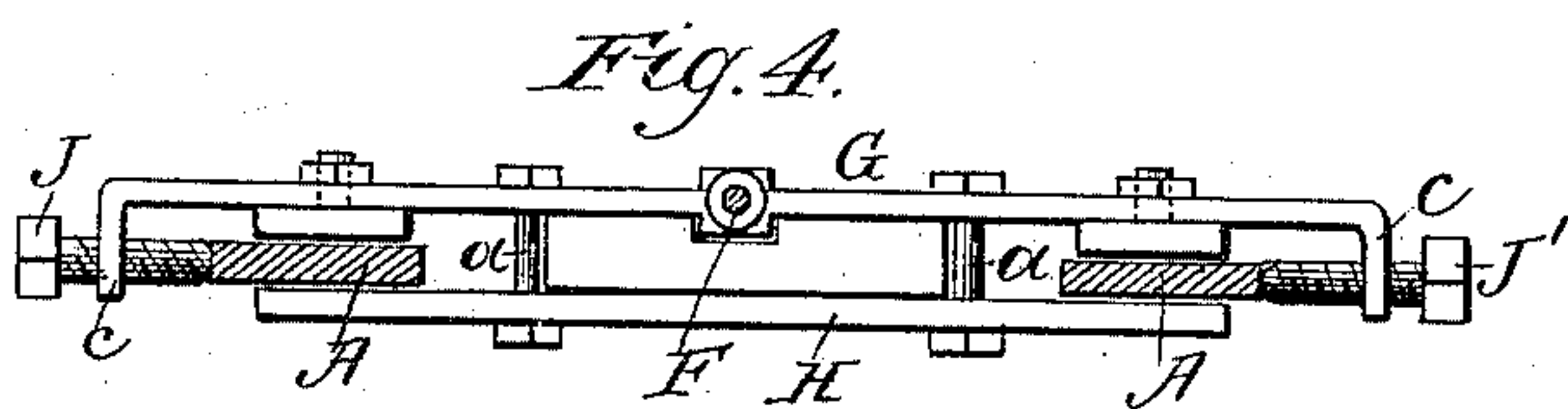
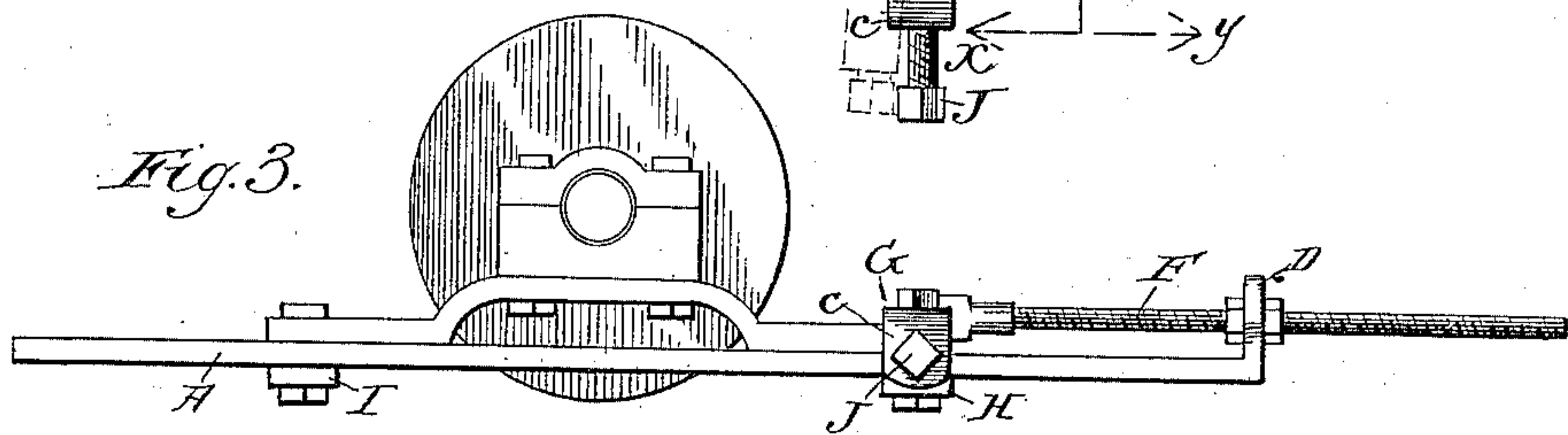
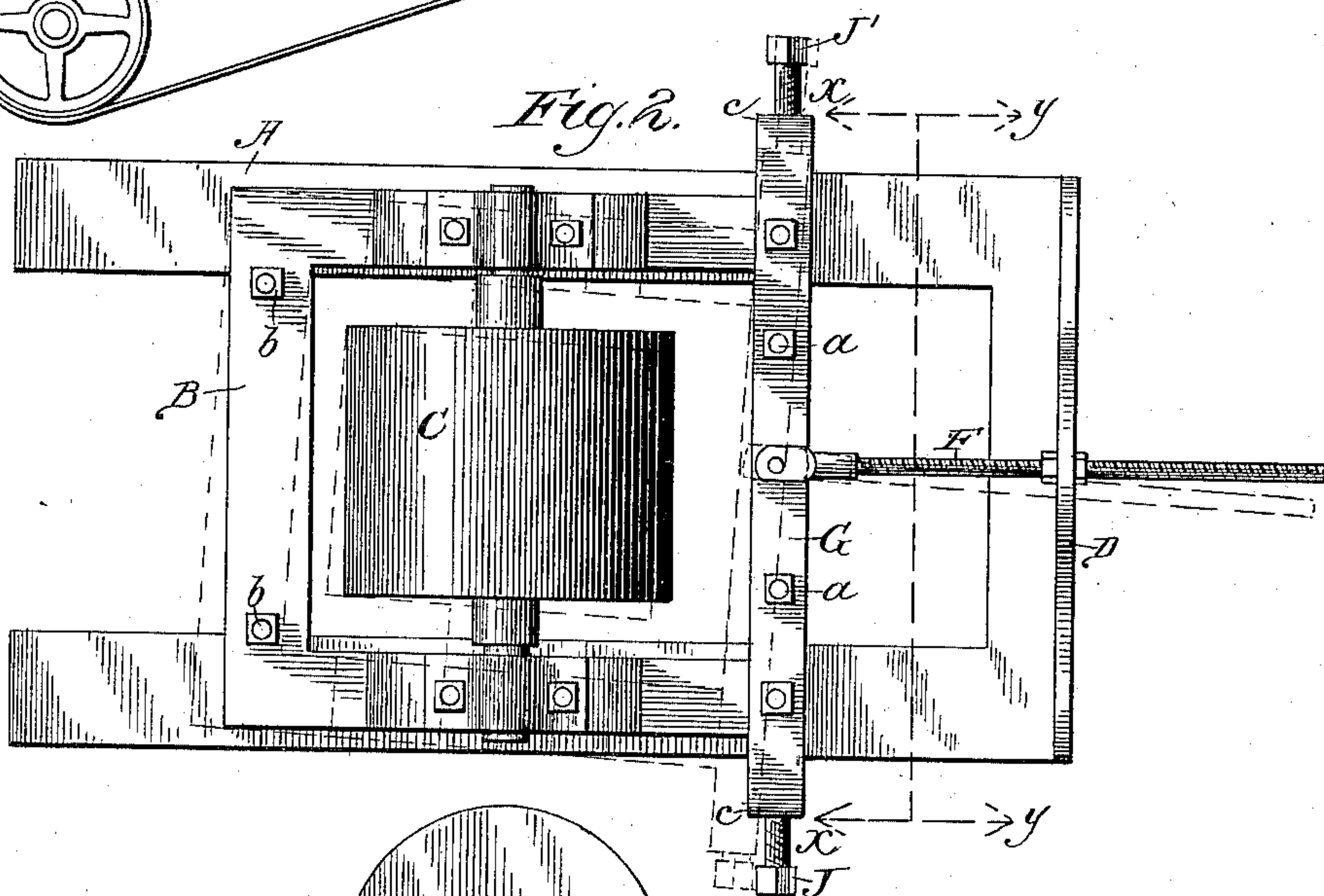
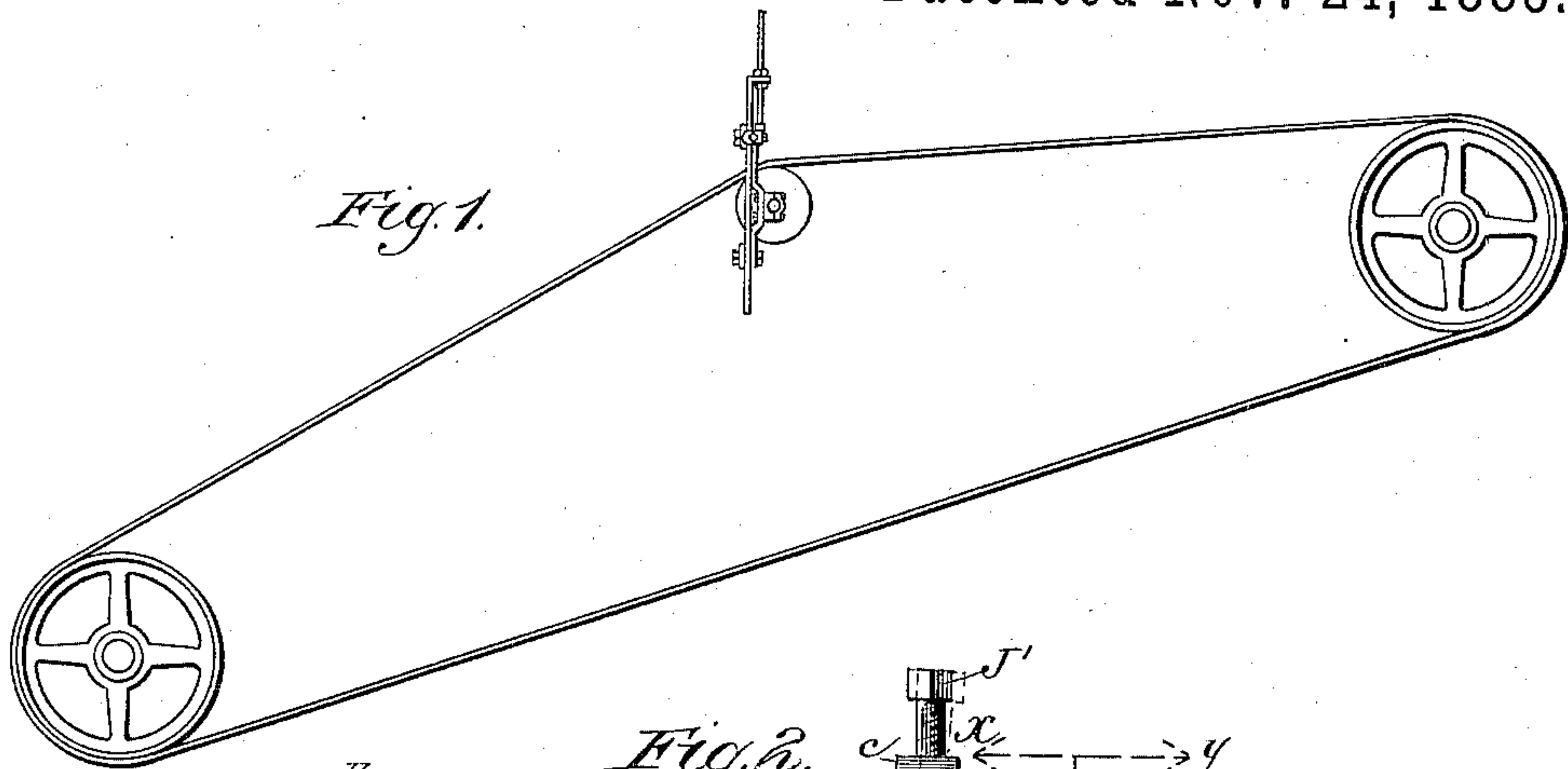
(No Model.)

D. HANNEY.

COMBINED BELT EQUALIZER AND TIGHTENER.

No. 330,977.

Patented Nov. 24, 1885.



Witnesses.

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UNITED STATES PATENT OFFICE.

DAVID HANNEY, OF TURNER JUNCTION, ILLINOIS.

COMBINED BELT EQUALIZER AND TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 330,977, dated November 24, 1885.

Application filed June 22, 1885. Serial No. 169,369. (No model.)

To all whom it may concern:

Be it known that I, DAVID HANNEY, a citizen of the United States, residing at Turner Junction, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Combined Belt Equalizers and Tighteners, of which the following is a specification.

This invention relates to improvements in combined belt equalizers and tighteners, which are arranged at a point intermediate the belt-pulleys for the purpose of tightening and equalizing any difference in alignment there may be between the two pulleys.

The object of this invention is to provide a belt-tightener of a simple and effective construction, which may be shifted laterally or at an oblique angle relative to a horizontal or vertical line. I attain this object by devices illustrated in the accompanying drawings, in which—

Figure 1 represents an end elevation of a belt-tightener embodying my invention and in its operative position; Fig. 2, an enlarged top plan view of the same; Fig. 3, a similar side elevation of the same; Fig. 4, a transverse section on the dotted line indicated by *x x* in Fig. 2, looking in the direction of the arrow; Fig. 5, a similar section looking in a direction indicated by the arrow *y y* of Fig. 2.

Similar letters of reference indicate the same parts of the several figures of the drawings.

The bed-plate A is preferably of U-shaped form, and supports the sliding frame B, on which pulley C is tightened, one end of the bed-plate being provided with an upturned flange, D, in which is a horizontally-elongated slot, E, through which passes loosely a screw-threaded rod, F, which is pivotally secured to the upper end bar, G, of the pulley-frame, so that by turning said rod the frame may be reciprocated and thereby adjusted on the bed-plate. On the under side of the bed-plate is a bar, H, which is bolted to the bar G by means of bolts *a*, (see Fig. 4,) which clamp said plates with and hold the pulley-frame upon the bed-plate. The opposite end of the frame is likewise secured to the bed-plate by a plate, I, upon the under side thereof, secured to the frame by bolts *b b*, and after being adjusted the frame may be clamped tightly to the bed-plate by simply tightening the

bolts *a b*, so as to tighten the plates and frame upon the bed-plate. Bar G is of a length considerably greater than the width of the bed-plate and frame, and has its extremities bent so as to form lugs or projections, which are provided with screw-threaded perforations, in which work opposing bolts or screws J J, the inner ends of which impinge the said edges of the bed-plate. These bolts may be so adjusted as to maintain the pulley-frame in a line coincident or parallel with the frame, but by unscrewing one of said bolts and screwing up the other, so that both will impinge against the edges of the bed-plate, the pulley may be shifted at an oblique angle in either direction, as the case may be, and as indicated by the dotted lines in Fig. 2, the frame having a somewhat pivotal-like movement at its opposite end, though, if desired, it may be bodily shifted laterally. After adjusting the pulley-frame lengthwise, it is then proper to make whatever lateral adjustment is desired, and, owing to the elongated slot in the flange of the bed-plate, this adjustment may be made without bending or twisting the adjusting-rod.

I have shown in the drawings ordinary nuts and bolts for the purpose of locking the pulley-frame in whatever adjustment may be given it, but it is obvious that any other well-known locking devices might be employed instead thereof.

In practice it is designed to use this combined belt tightener and equalizer on the inside of the belt, as shown, but obviously it might be used upon the outside, though probably not to so good an advantage.

In the practical operation of my tightener in cases where a new belt is desired to be employed, it is not necessary that the belt should be cut the exact length to compass the two pulleys. In fact, a great saving of belting may be effected by cutting the belt a foot or more too long and utilizing my tightener to take up the slack. By this means, when the belt becomes so worn at the juncture of its ends as to necessitate a new splice, a sufficient amount of the worn portion may be cut off and a new splice made, still leaving the belt longer than is necessary to compass the two pulleys. When such new splice is made, the tightener may be shifted to accommodate the new length of belt.

When, from faulty splicing, uneven stretching, inaccurate alignment between two shafts, or from any other cause, the belt may have a tendency to work off to either side of either
5 pulley, by introducing my tightener between the pulleys and shifting at a proper angle to the travel of the belt the belt may easily be forced back to the center of the pulley from either side thereof.

10 Having described my invention, what I claim, and desire to secure by Letters Patent, is—

15 1. A pulley and a pulley-frame, in combination with a bed-plate directly supporting said frame, and means for adjusting said pulley laterally and perpendicularly on the bed-plate, substantially as described.

2. The bed-plate provided at one end with an upturned flange having an elongated slot, the pulley, and the pulley-frame supported on
20 said bed-plate, in combination with a tightening-rod passing through said slot, and means for making a lateral adjustment of said pulley, substantially as described.

3. The pulley, the pulley-frame, and the
25 bar G, in combination with adjusting-screws passing through said bar and impinging against the edges of the bed-plate, and a tightening-rod pivoted in said bar and bearing in the bed-plate, substantially as described.

DAVID HANNEY.

Witnesses:

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